

## CLAIMS

What is claimed is:

1. An electric machine, comprising:
  - a heat-generating machine component; and
  - a temperature sensor constructed as temperature radiation detector for contactless determination and/or measurement of heat radiating from the machine component for ascertaining an absolute temperature.
2. The electric machine of claim 1, wherein the machine component is a member selected from the group consisting of stator, rotor, winding, winding overhang, and bearing assembly.
3. The electric machine of claim 1, wherein the machine component is at least one member selected from the group consisting of rotating component and component operating under voltage.
4. The electric machine of claim 1, wherein the radiation detector includes an infrared measuring system.

5. The electric machine of claim 1, and further comprising a housing defining an interior space for accommodating the machine component, with the temperature radiation detector disposed in the interior space, and an evaluation device receiving information from the temperature radiation detector at predetermined time instances for establishing a thermographic image of the electric machine.
6. The electric machine of claim 5, wherein the evaluation device is constructed for modifying an operating parameter of the machine component in response to the information inputted from the temperature radiation detector.
7. The electric machine of claim 6, wherein the machine component is a rotating component, said operating parameter being a rotation speed of the rotating component.
8. The electric machine of claim 5, and further comprising a fan for cooling the machine component, said evaluation device being constructed for modifying an operating parameter of the fan in response to the information inputted from the temperature radiation detector.

9. The electric machine of claim 8, wherein the operating parameter is a rotation speed of the fan.
10. The electric machine of claim 1, wherein the radiation detector is an infrared radiation detector.